NEC

EXPRESSBUILDER Command Line Interface User's Guide

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Chapter 1　Notations, Notes and Additions

This document describes how to use EXPRESSBUILDER from the command line on the operating system (OS) when EXPRESSBUILDER is stored in Internal Flash Memory.

■ Attention

This document is intended for persons who are familiar with the operating system's functions and operations and the network's functions and setup. For operations and inquiries about the operating system, see its online help information.

■ Notations in This Document

The following explains three notations that are used in this document:

IMPORTANT:	Points that are mandatory or require attention when using the software or the hardware.
CHECK:	Points that are require confirmation when using the software or the hardware.
TIP:	Helpful and useful piece of information.

■ Fonts and Marks in This Document

The *Italic* font shows the option of command in this document.
The character string surrounded by <> means a value specified by the character string in this document except for XML tag. The character of <> is not contained in the value.
The character string surrounded by [] means the omissible argument.

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Chapter 2 Usage

2.1 Overview

This document describes the Command Line Interface (CLI) of EXPRESSBUILDER.
You can operate CLI by using eb_cli command.

eb_cli command has three modes, interactive "shell mode", non-interactive "one liner mode" and batch format "XML scripting mode" which uses specified file.

2.2 System Requirements

eb_cli command can be executed only on a computer with Internal Flash Memory.

To execute CLI, administrator authority of operating system is required.

Windows OS:	Administrator
Linux OS:	root

CHECK:

- In case of Windows Server 2008, Windows Server 2008 R2, Windows Server 2012 and Windows Server 2012 R2, you need to set the permission to access to the folder including execution file (eb_cli.exe). After setting the permission, the standard user can also use CLI.

2.3 Using the Command Line

All the operations in this document are executed from eb_cli command. eb_cli command is created in the following folder when you install EXPRESSBUILDER.

- **Windows OS:**
  C:\Program Files\EXPRESSBUILDER\ar_menu

- **Linux OS:**
  Directly under the folder which is specified as installation folder

2.3.1 Shell mode

In shell mode, you can run CLI commands interactively by using proprietary shell function.

■ Starting shell mode

You can run CLI commands by shell mode when eb_cli command is started from command line on OS.

See "*Chapter 3 Commands*" for detail of CLI commands.

```
eb_cli [Option]
```

eb_cli	Indicates the EXPRESSBUILDER command line interface command.
Option	Specifies an option. The following option is selectable at this command. *-h*	*-help* Shows the syntax of eb_cli commands. Shell mode does not start when this option is specified.

Example

To start shell mode, type the following.

```
> eb_cli
```

CLI command prompt appears when shell mode starts.

```
EXPRESSBUILDER Version 1.0.0.0


->
```

■ Exiting shell mode

To exit shell mode, type the exit command as follows or press <Ctrl> + <C> keys.

```
-> exit
```

■ **Key operations on shell mode**

Key operations in shell mode are as follows.

Table 2-1 Key operations list

Key	Description
Enter	Runs a command.
BackSpace	Erases one character.
←	Moves the cursor backward one character.
→	Moves the cursor forward one character.
↑	Recalls the prior command.
↓	Recalls the next command.
Ctrl + M	Runs a command. (equivalent to the key "Enter")
Ctrl + H	Erases one character. (equivalent to the key "BackSpace")
Ctrl + C	Exits the shell mode.

2.3.2 One liner mode

One liner mode runs only specified CLI command.

You can run a CLI command by one liner mode when you type as follows.

See "*Chapter 3 Commands*" for detail of CLI commands.

eb_cli *[Option]* '<CLI Command>'

eb_cli	Indicates the EXPRESSBUILDER command line interface command.
Option	Specifies an option. The following option is selectable at this command. *-h* | *-help* Shows the command syntax of the eb_cli command. CLI command is not run when this option is specified.
'<CLI Command>'	Specifies a CLI command by surrounding with single quotation mark.

Example

To run a command in one liner mode, type the following.

eb_cli 'show /'

■ **Notes on executing one liner mode**

If you want to specify a double quotation (") in CLI command, add a backslash (\) before the double quotation.

Example

eb_cli 'load –destination \"d:\file path\" /edom'

2.3.3 XML scripting mode

In XML scripting mode, you can write commands and their arguments in XML file, and then run commands by specifying XML file to eb_cli command.
See "*Chapter 4 XML interface*" for detail of XML file format.

eb_cli –*f <XML file name> [Option]*

eb_cli	Indicates the EXPRESSBUILDER command line interface command.
<XML file name>	Specifies XML file in which eb_cli commands are written.
Option	Specifies an option. The following options are selectable at this command. *-h* | *-help* Shows the command syntax of the eb_cli command. CLI command is not run when this option is specified. *-x* | *examine* Parses XML file specified but the command does not run.

Example

To run commands by XML scripting mode, type the following.

eb_cli –f filename.xml

Chapter 3 Commands

This section describes basic CLI commands. These commands are based on SMASH style proposed by Distributed Management Task Force (DMTF).
Each command functions to a specified target. See "*3.1.1* Target" for detail of the target.
Help string, command syntax, of each command appears when *"-h | -help"* option is specified as the <*options*> of the command. The argument placed between "[" and "]" is omissible.

TIP:

- help, cd, exit and show commands are supported by all the targets.

3.1 Syntax of Commands

help

Syntax

help *[<options>]* [<target>]

Description

Shows information about <target> or shows information about the current target when <target> is omitted.
This command is supported by all the targets.

cd

Syntax

cd *[<options>]* [<target>]

Description

Changes the current target to <target> or shows the current target when <target> is omitted.
You can shorten subsequent commands by changing current target.
This command is supported by all the targets.

exit

Syntax

exit *[<options>]*

Description

Terminates and logs out the shell mode.

This command is supported by all the targets.

show

Syntax

show *[<options>]* [<target>]

Description

Shows information about <target> or shows information about the current target when <target> is omitted.

This command is supported by all the targets.

load

Syntax

load *[<options>]* [<target>]

Description

Uploads data to <target> or uploads data to the current target.

reset

Syntax

reset *[<options>]* [<target>]

Description

Resets <target> or resets the current target when <target> is omitted.

3.1.1 Target

The target describes the object to manage by similar notation to the path name of file system.
If you start a path with "/", the path is recognized as absolute path. Otherwise path is recognized as relative path.
The "." is describes the current target and the ".." is describes the parent target.
If the target is not specified, commands functions to a current target. The current target can be changed by the cd command. The default current target is "/"(root) when CLI started (login).

3.1.2 Basic options

The format of basic options is based on SMASH style.
Other options are described in following chapter which have different function depending on the combination between command and target.

-h | -help

Description

Shows the description of the command and command syntax.
The command is not run when this option is specified.
This option is supported by all the basic commands.

-x | -examine

Description

Checks the syntax of the command.
The command is not run when this option is specified.
This option is supported by all the basic commands.

-o | -output <arg>(,<arg>…)

Description

Specifies the format of displaying the result of command.
format=text
You can specify the format of result.
If *text* is specified, output is in text format.
When this option is omitted, the command is run as *format=text*.
This option is supported by all the basic commands.

-source <value>

Description

Specifies the source folder path.

This option is supported by only the load command.

Whether this option is available or not depends on the target.

-destination <value>

Description

Specifies the destination folder path.

This option is supported by only the load command.

Whether this option is available or not depends on the target.

3.1.3 Specific options

-outputfile <path>

Description

Outputs the result of the command to the file of specified <path>.

When the file of specified <path> does not exist, a new file is created.

When the file of specified <path> exists, the result is appended to the file.

This option is supported by all the basic commands.

3.2 Summary of command output

Each command shows a result as following format.

```
-> <CLI command>
<status>
results

->
```

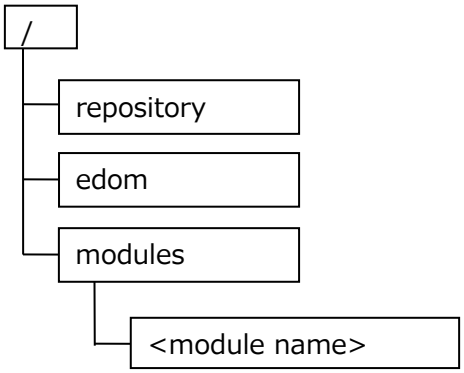
Each status is as follows.

Table 3-1 Status list

Status	Description
COMMAND COMPLETED	Command was successful. This status does not display for cd, exit, help, show command.
COMMAND PROCESSING FAILED	Syntax error was occurred.
COMMAND EXECUTION FAILED	Command was unsuccessful.

3.3 Diagram of the entire address space

A diagram of the entire eb_cli address space is as follows.



3.4 Example of command execution

Example of command execution when eb_cli started in shell mode is as follows.
If you execute a command in one liner mode, change following format.

eb_cli '<command>'

3.4.1 Changing the current target

To change the current target, use the cd command.

Example 1

"cd /modules/application1" command changes the current target to /modules/application1.

```
-> cd /modules/application1
/modules/application1
```

Example 2

"cd" command shows the current target.

```
-> cd
/modules/application1
```

3.4.2 Creating the repository

To create the repository, use the load command.

Example

"load /repository" command creates the repository.

```
-> load /repository
COMMAND COMPLETED
Updated the repository.
```

3.4.3 Clearing the repository

To clear the repository, use the reset command.

Example

"reset /repository" command clears the repository.

```
-> reset /repository
COMMAND COMPLETED
Deleted the repository.
```

3.4.4 Showing the application information

To show the application information, use the show command.

Application list or application detailed information appears depending on the target.

Example 1

"show /modules" command shows the list of application which can be handled.

```
-> show /modules
ufip=/modules
ufit=modules
Targets:
  ESMPRO_AGENT
  ESMPRO_AMEXP
  ESMPRO_AMHETTP
  ESMPRO_EXPMG
  ezclct
  uraiduti
Properties:
  EntryCount=6
Verbs:
  cd
  exit
  help
  show
  load
  stop
```

Example 2

"show /modules/ezclct" command shows detailed information of ezclct application.

```
-> show /modules/ezclct
ufip=/modules/ezclct
ufit=ezclct
Targets:
Properties:
  Module=utility
  Version= 2.7.3
  Installed=
Verbs:
  cd
```

```
  exit
  help
  show
  load
```

3.4.5 Installing the application

To install the application(s), use the load command.
Each application is installed separately.

Example

"load /modules/application1" command installs application1.

```
-> load /modules/application1
COMMAND COMPLETED
  /modules/application1
Now installing.
```

3.4.6 Updating data in Internal Flash Memory

To update or restore data in Internal Flash Memory, use the load command.

Example

"load /edom" command updates data in Internal Flash Memory.

```
-> load /edom
COMMAND COMPLETED
Updated Internal Flash Memory.
```

3.4.7 Showing the repository path

To show the repository path, use the show command.

Example

"show /repository" command shows the repository information.
The repository path is shown as property.

```
-> show /repository
ufip=/repository
ufit=repository
Targets:
Properties:
```

```
  RepositoryPath=C:\tmp
Verbs:
  cd
  exit
  help
  show
  load
  reset
```

Chapter 4 XML Interface

4.1 XML interface

4.1.1 Overview

You can execute commands in batch format when specifying XML file to eb_cli.

4.1.2 XML elements

The format of XML file is as follows. Details of those elements are described in Table 4-1.

```
<?xml version="1.0" encoding="UTF-8"?>
<request>
  <COMMAND>
    <abort>true</abort>
    <instance>
      <ufip>Target of this COMMAND</ufip>
      <options>
        <option>
          <name>Name of option</name>
          <value>
            <val>Value of option<val>
          </value>
        </option>
      </options>
    </instance>
  </COMMAND>
</request>
```

Table 4-1 Elements of XML file

Name of element	Count of appearance *	Description
request	1	A root element of request XML.
COMMAND	+	An element specifying a basic command. Specify command as tag name. (Specify <load> for load command)
abort	?	An element specifying a behavior in case of error. If set to **true**, the process is stopped. If set to **false**, the process runs on. If this element does not exist, **true** is used.

		This setting is only used when plural commands are defined in XML file.
instance	?	An element grouping a target, options and properties.
ufip	?	An element specifying a target of the command.
options	?	An element grouping option elements.
option	+	An element corresponding to option.
name	1	An element holding a name of option or property.
value	?	An element holding a val element.
val	1	An element holding a value of option or property.

* +: more than 1, ?: 0 or 1, (*number*): appear *number* times

4.1.3 Examples of XML file

Followings are typical commands with a shell mode and XML interface.

Example 1

The case of show command to /modules element:

```
->show /modules
```

```
<?xml version="1.0" encoding="UTF-8"?>
<request>
  <show>
    <instance>
      <ufip>/modules</ufip>
    </instance>
  </show>
</request>
```

Example 2

The case of installing application specified /modules/application element:

```
->load /modules/application
```

```
<?xml version="1.0" encoding="UTF-8"?>
<request>
  <load>
    <instance>
      <ufip>/modules/applicaion</ufip>
    </instance>
  </dump>
</request>
```

Example 3

The case of updating Internal Flash Memory from DVD (E: drive):

```
->load –source E:\ /edom
```

```
<?xml version="1.0" encoding="UTF-8"?>
<request>
  <load>
    <instance>
      <ufip>/edom</ufip>
      <options>
        <option>
          <name>source</name>
          <value>
            <val>E:\</val>
          </value>
        </option>
      </options>
    </instance>
  </load>
</request>
```

Chapter 5 Log Management

5.1 Logging specification

When you specify the -outputfile option to eb_cli command, the results displayed to console is also output to a log file.

5.1.1 Logging contents

When you run eb_cli command by shell mode, the logging is following.

```
EXPRESSBUILDER Version 1.0.0.0

-><CLI command>
<Status>
Execution results

-><CLI command>
<Status>
Execution results
```

(1)

(1)

The command outputs the range (1) at one executing, and repeats while the shell mode is terminated.

When you run eb_cli command by one liner mode, the logging is following.

```
EXPRESSBUILDER Version 1.0.0.0

-><CLI command>
<Status>
Execution results

EXPRESSBUILDER Version 1.0.0.0

-><CLI command>
<Status>
Execution results
```

(1)

(1)

The command outputs the range (1) at one executing, and when you specify the same log file to command, it is output for executing counts.

Chapter 6 Glossary

Table 6-1 Glossary

Term	Description
Command Line Interface (CLI)	A user interface to execute commands by typing characters from a keyboard.
Distributed Management Task Force (DMTF)	A standard organization for development and maintenance the standards to manage system on IT environment of Internet and Corporations.
Systems Management Architecture for Server Hardware (SMASH)	A standard protocols to manage the hardware without dependence on the vender or OS of server. DMTF propose it.
Address Space	A territory in that you can operate the objects and functions of CLI by specifying the path.
Managed Element	An instance of managed element or provided function It constructs the address space.
User Friendly instance Tag (UFiT)	A unique instance name in Address Space.
User Friendly instance Path (UFiP)	The unique path to an instance formed by concatenating the UFiTs of each instance from the root instance to the terminating instance.
Module	The general name of software in install function.
Repository	Temporary files on HDD for accessing EXPRESSBUILDER. These files are copied from Internal Flash Memory usually.
Internal Flash Memory	A built-in flash memory that stored EXPRESSBUILDER as standard.

Revision History

1.00	2014/08/06	Initial edition.

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